MA-19/25/66/67

Mobile GPS Antenna

SAN JOSE TECHNOLOGY, INC.

11F.,No.2,Sec.4, Jhongyang Rd. , Tucheng City,
Taipei County ,Taiwan (R.O.C.)
Tel: 886-2-2269-4456 Fax: 886-2-2269-4451

USER'S MANUAL Rev. C

I. PREFACE

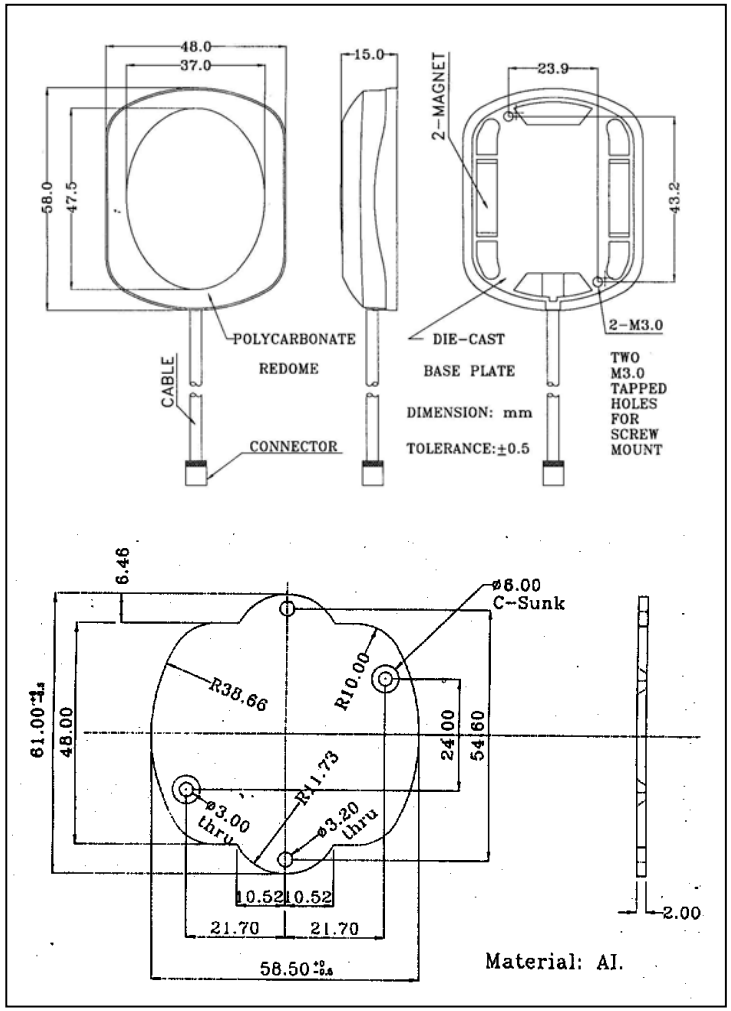
This text specifies the basic operational characteristics of the active GPS antenna modules MA-19/MA-25/MA-66/MA-67 under a standard test condition of 3V DC (MA-19)/ 5V DC (MA-25/66/67) & 25°C/ 50% R.H.

II. INTRODUCTION

MA-19/MA-25/MA-66/MA-67 is the integration of a high performance GPS patch antenna and a state-of-the-art low noise amplifier into a very low profile/ extremely compact/ fully waterproof enclosure which, when connected to a GPS receiver with 3V DC or 5V DC antenna power, provides excellent signal amplification and out-band filtering & rejection.

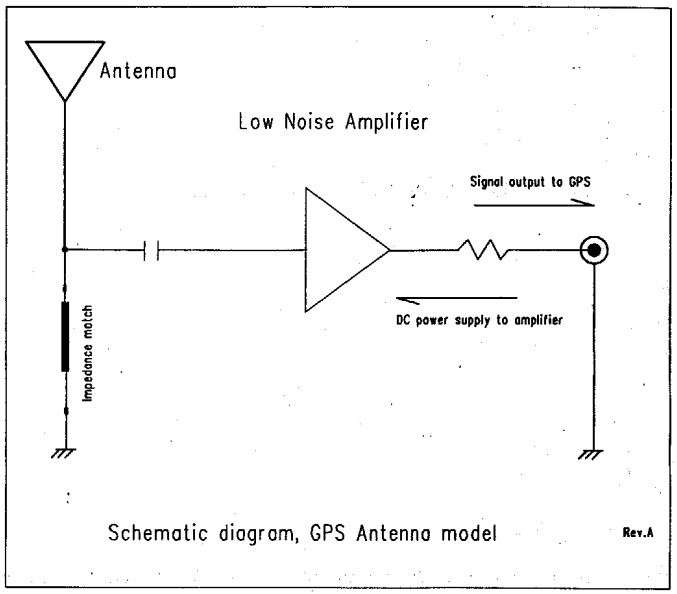
SANAV
San Jose Technology, Inc.

V. Technical Drawing



IV. INSTALLATION

1. Secure your MA-19/MA-25/MA-66/MA-67 antenna to the top of your vehicle and carry its cable into the vehicle.
2. Link the cable connector to your GPS receiver.
3. Start with your navigation.



SANAV
San Jose Technology, Inc.

III. SPECIFICATIONS

PHYSICAL	
Construction:	Polycarbonate-radome at top, die-cast shell at bottom/ rubber gasket for water seal in between
Dimension:	58mm (L) x 48mm (W) x 15mm (H)
Weight:	65 grams (excluding cable & connector)
Color of Radome:	Standard in dark gray, other colors available upon request
Standard Mounting:	Magnet mount with two magnets
Optional Mounting 1:	Screw mount with two M3 tapped holes on the plastic flange of MA-19/MA-25/MA-66/MA-67
Optional Mounting 2:	Customized metal sheet

ANTENNA ELEMENT	
Center Frequency:	1575.42 MHz +/- 1.023 MHz
Polarization:	R.H.C.P. (Right Hand Circular Polarization)
Absolute Gain at Zenith:	+5 dBi typically
Gain at 10^{o} Elevation:	-1 dBi typically
Axial Ratio:	3 dB max.
Output VSWR:	1.8 Max.
Output Impedance:	50 ohm

LOW NOISE AMPLIFIER	
Center Frequency:	1575.42 MHz +/- 1.023 MHz
Gain:	MA-19: 27 dB typically MA-25: 26 dB typically MA-66: 30 dB typically MA-67: 30 dB typically
Band Width:	2 MHz min.
Noise Figure:	MA-19: 1.3 max. MA-25: 2.6 max. MA-66: 1.5 max. MA-67: 2.0 max.
Out of Band Attenuation:	20dB min. @F0 +/- 50MHz MA-67: 30dB min. @F0 +/- 50MHz
Supply Voltage:	MA-19: 2.5~4.5V DC MA-25: 3.0~5.0V DC MA-66: 4.5~5.5V DC MA-67: 4.5~5.5V DC
Current Consumption:	MA-19: 5.5 mA +/- 1mA@3.3V MA-25: 11 mA +/- 2 mA@5V MA-66: 28 mA +/- 3 mA MA-67: 28 mA +/- 3 mA
VSWR:	2.0 max.
Output Impedance:	50 ohm
CABLE & CONNECTOR	
RF Cable:	5 meter RG174/U (standard), other length available
Pulling Strength:	6 Kg./5 sec. with molded plastics on connector end for strain relief
Connector Available:	BNC, TNC, FME, GT5, MCX (OSX), SMA, SMB or SMC in straight or right angle type
Optional Adapters:	FME~MCX, FME~BNC, FME~SMA, FME~SMB, FME~TNC

SANAV
San Jose Technology, Inc.

OVERALL PERFORMANCE (Antenna Element, LNA & Cable)	
Center Frequency:	1575.42 MHz
Gain:	MA-19: 20 dB typically MA-25: 25 dB typically MA-66: 27 dB typically MA-67: 27 dB typically
Noise Figure:	MA-19: 1.3 max MA-25: 2.6 max. MA-66: 2.0 max. MA-67: 2.0 max.
Band Width:	2 MHz
Axial Ratio:	3 dB max.
VSWR:	2.0 max
Output Impedance:	50 ohm

ENVIRONMENTAL	
Operating Temperature	-30°C~+85°C
Storage Temperature:	-40°C~+90°C
Relative Humidity:	95% non-condensing
Waterproof:	100% waterproof